

PORTABLE LOW-POWER GAS DISCHARGE LASER

Abstract of Disclosure

A short cavity gas discharge laser stabilized by use of a highly reflective output coupler adjustably connected to a support isolated from the longitudinal thermal expansion of the laser enclosure. A flexible seal between the output coupler and the laser enclosure accommodates positional adjustment of the output coupler relative to the mirror to optimize performance. In one embodiment, the laser gas is contained by the enclosure and is in contact with the electrodes which divide the interior of the enclosure into two portions that provide gas ballast for the laser. In another embodiment a pair of electrodes are located adjacent to and outside of a discharge tube made of dielectric material. The laser discharge occurs in the discharge tube and the electrodes are not in physical contact with the discharge. Gas ballast is optionally provided through at least one reservoir in fluid communication with the discharge tube.

